

Remarks

This amendment responds to the Office Action mailed January 20, 2006. Claims 1-7 are pending for reconsideration. Applicants thank the Examiner for the acknowledgment of Applicants' claim for foreign priority.

Rejections Under 35 U.S.C. §103

Claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,828,245 to Chang ("Chang" hereafter) in view of U.S. Patent No. 6,319,821 to Liu et al. ("Liu" hereafter). Applicants respectfully traverse these rejections for at least the following reasons.

Applicants' independent claim 1 recites a method for manufacturing metal lines of a semiconductor device including, *inter alia*, "forming a stacked structure of a first etch barrier film, a second interlayer insulating film, a second etch barrier film, a third interlayer insulating film and an anti-reflection film," "forming a photoresist film on the entire surface of the exposed lower metal line, the via contact hole, and the remaining antireflection film" and "subjecting the photoresist film to an exposure and development process using an upper metal line mask to form the photoresist film pattern for defining an upper metal line region." Support for this combination of features may be found in Applicants' specification as originally filed at, for example, Figures 3a-3e and the corresponding description at page 7, line 4, to page 10, line 15.

Contrary to the Office Action, it is respectfully submitted that Chang and Liu, whether considered individually or in combination, fail to teach or suggest each and every feature of the present invention. According to Chang, a "drawback of forming etching stop layers between the insulating layers (IMD/ILD layers), which are frequently porous to reduce the dielectric constant of the insulating layer, is that poor adhesion between the etching stop and IMD layer results leading to reduced multi-layer strength and in many cases, peeling during subsequent chemical mechanical polishing processes" (*See* Chang column 2, lines 31-42). As acknowledged in the Office Action, Chang fails to teach, among other features, a third interlayer insulating film. The

Office Action then asserts that it would have been obvious “to have had the structure shown in Chang include a third dielectric layer, as taught in the method of Liu.” It is respectfully submitted that the asserted modification of Chang is precisely the drawback that Chang is directed to overcoming. Thus, it is respectfully submitted that the proposed modification by Liu would improperly change the principle of operation of Chang. *See* MPEP § 2143.01(VI).

For at least the above reasons, it is respectfully submitted that Chang and Liu cannot be combined as asserted in the Office Action, that the rejection under 35 U.S.C. §103(a) of independent claim 1 should be withdrawn, and that claim 1 is allowable. Moreover, claims 2-7 depend, either directly or indirectly, from independent claim 1 and therefore recite the same allowable combination of features as well as reciting additional features that further distinguish over the applied prior art, and are also allowable.

Conclusion

In view of the foregoing, Applicants respectfully request that a notice of allowance be forthcoming. Entry of this Response is respectfully submitted to be proper insofar as it does not present new matter and does not add any additional claims.

The Examiner is invited to contact the undersigned for any reason related to the advancement of this case. The Commissioner is authorized to credit any over payment or charge any deficient to deposit account number 08-1641.

Respectfully submitted,

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